



South Carolina Department of Health and Environmental Control

Promoting and Protecting the Health of the Public and the Environment

State Perspective on Stormwater Ponds

Shannon Hicks, P.E.

Manager, Coastal Stormwater Permitting



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Presentation Overview

- Why Manage Stormwater?
- State Regulatory Requirements
- Pond Maintenance
- When is a Permit Required?
- Ponds and Wetland Areas
- Local Government Stormwater Management Programs



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Why Manage Stormwater?



- Impervious surfaces increase the amount of rain water runoff leaving a developed area at one time



- Non Point Source Pollution
 - Bacteria
 - Chemicals
 - Nutrients
 - Litter
 - Debris
 - Oil



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Why Manage Stormwater?





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State Regulatory Requirements

- R. 72-300 Stormwater Management and Sediment Reduction Regulations (Effective June 26, 1992)
 - ✓ Quantity Control – rate of flow
 - ✓ Quality Control
- Subdivisions approved prior to effective regulations exempt





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Pond Stormwater Management Systems



Dry Detention Ponds

- Bottom slope not less than 0.5 percent
- Remove depressions where water might pocket
- Ensure stormwater runoff drains out within 72 hours
- Maintain design storage capacity
- Schedule for mowing grass



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Pond Stormwater Management Systems

Wet Detention Ponds

- Bottom slope not less than 0.5 percent
- Maintain design storage capacity
- Use aquatic weed control program to prevent overgrowth of vegetation in pond
- Recommended depth for permanent pool is 4-6 feet





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Pond Stormwater Management Systems



- Outlet structures are designed to:
 - ✓ Reduce peak rate of flow
 - ✓ Control “first flush” of runoff
- Keep clear of debris



Maintenance Requirements

- Maintenance Plan
- Letter from owner taking ownership and accepting responsibility of maintenance
- Example maintenance items:
 - Mowing grass
 - Repairing bank erosion
 - Removal sediment accumulation
 - Keep storm drains free of blockages
 - Inspecting/cleaning pond outlet control structures
 - Vegetation control
 - Maintenance access remains clear



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Pond Maintenance



- Ensure access is available for maintenance
- Do not allow sheds, fences, landscaping, or other structures in drainage easements or in drainage swales



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Pond Maintenance





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Pond Maintenance





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State Stormwater Management Program

- State Stormwater Management Program authority does not extend to:
 - ❖ Fertilizer Application Rates
 - ❖ Pesticide, Herbicide Application Rates
 - ❖ Testing of Dredged Material
 - Clemson Pesticide Regulatory Program
 - Pesticide Application NPDES General Permit
- <https://www.scdhec.gov/Environment/WaterQuality/NPDES/PesticidePermit/>

****Note:** Does not apply to stormwater management ponds.



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State Stormwater Management Program

- Pond Maintenance – Maintaining original intent of facility requires no land disturbance permit
- Land disturbance permitting requirements for placement of dredged material -- potentially
- Consult DHEC Wetland Staff and U.S. Army Corp of Engineers regarding maintenance activities involving wetlands



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EPA NPDES Stormwater Program

- 1972: Clean Water Act
- 1990s: National Pollutant Discharge Elimination System (NPDES)
 - ✓ Construction sites 1 acre and greater
 - ✓ Sites part of a Larger Common Plan of Development
 - ✓ SC Coastal Zone Captures Sites within $\frac{1}{2}$ mile of a receiving water body





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Local Government Stormwater Programs

- 1990 NPDES Phase 1
 - ✓ Large and Medium Municipal Separate Storm Sewer Systems (MS4s)
 - ✓ Medium 100,000-250,000 population
 - ✓ Large 250,000 and more population
- 1999 NPDES Phase II
 - ✓ Small Regulated MS4s
 - ✓ Small – Population less than 100,000



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Local Government Stormwater Programs

Six Minimum Control Measures

1. Stormwater Runoff Program for Construction Activities
2. Stormwater Runoff Program for Post Construction
3. Public Education and Outreach
4. Public Involvement/Participation
5. Illicit Discharge, Detection and Elimination
6. Pollution Prevention/Good Housekeeping



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www.scdhec.gov
(803) 898-DHEC (3432)



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